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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,600	08/08/2001	Shek Fai Lau	SHPR-01041US5	6811

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EXAMINER

CHIESA, RICHARD L

ART UNIT PAPER NUMBER

1724

DATE MAILED: 08/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/924,600

Applicant(s)
LAU ET AL

Examiner
RICHARD L. CHIESA

Group Art Unit
1724

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on July 9, 2003
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 29-54, and 58-82 is/are pending in the application.
- Of the above claim(s) 29-31, 38-40, 48-51, and 64-66 is/are withdrawn from consideration.
- ☒ Claim(s) 32-37, 41-46, 58-63, and 71-82 is/are allowed.
- ☒ Claim(s) 47, 52-54, and 67-70 is/are rejected.
- ☐ Claim(s) is/are objected to.
- ☒ Claim(s) 29-54, and 58-82 are subject to ~~restriction~~ election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 13, 14
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

SN 09/924,600

DETAILED ACTION

Response To Communication

- (1.) The communication filed on July 9, 2003 has been entered.

Election Of Species

- (2.) Applicants' election of the Figures 7A-E species without traverse is acknowledged in Paper No. 10, filed on May 23, 2003. Claims 29-31, 38-40, 48-51, and 64-66 are therefore withdrawn from consideration as being drawn to non-elected species.

Claim Rejections – 35 USC 102/103

- (3.) The following is a quotation of the appropriate paragraphs of 35 USC 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless--

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- (4.) The following is a quotation of 35 USC 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

(5.) This application currently names joint inventors. In considering patentability of the claims under 35 USC 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicants are advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 USC 103(c) and potential 35 USC 102(f) or (g) prior art under 35 USC 103(a).

(6.) Claims 47, 67, and 68 are rejected under 35 USC 102(b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Borysiak. Borysiak shows (note Figures 1-3, 6) a method for cleaning wire first electrodes 24 in an electro-kinetic transporter-conditioner in a housing 56 with a base member 42, second electrodes 16, and frictional cleaners 36 (note col. 3, line 1 to col. 4, line 15) as claimed (35 USC 102b). It would appear that Borysiak does not explicitly mention that a high voltage is coupled between the first and second electrodes. However, this is the normal operation of any electrostatic precipitator and Borysiak does disclose this in col. 1, lines 10-65 by stating that a high electrical potential is produced between the electrodes for the purpose of

ensuring maximum collection of particulates. Consequently, it would have been readily obvious to one of ordinary skill in the art (35 USC 103a) to employ a high voltage between the electrodes of the Borysiak process in order to maximize particulate removal as suggested by Borysiak himself.

(7.) Claims 52-54, 69, and 70 are rejected under 35 USC 103(a) as being unpatentable over Borysiak in view of Utsumi et al. Borysiak, as described above in paragraph 6, discloses a wire electrode cleaning method substantially as claimed. It would appear that Borysiak does not disclose the use of bead-like cleaning member. In any case, Utsumi et al (note Figures 1-5) teach the well-known use of a bead-like cleaning member 90 (note col. 1, lines 30-48) in an electrostatic precipitator for the purpose of ensuring maximum removal of collected debris. It therefore would have been obvious to one having ordinary skill in the art to employ a bead-like cleaning member in the Borysiak wire electrode cleaning process in order to facilitate the removal of collected debris as taught by Utsumi et al.

Allowable Subject Matter

(8.) Claims 32-37, 41-46, 58-63, and 71-82 are allowed. These claims are allowable because the prior art fails to teach or fairly suggest the step of rotating an electro-kinetic conditioner or its housing to permit movement of a cleaning device along a wire or emitter electrode.

Conclusion

(9.) The prior art cited but not applied are considered pertinent to applicants' disclosure. These references are cited as art of interest to show other electrostatic precipitator systems.

(10.) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard L. Chiesa whose telephone number is (703) 308-3791.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1700 receptionist whose telephone number is (703) 308-0661.

Facsimile correspondence to Art Unit 1724 must be transmitted through (703) 872-9310. However, any facsimile correspondence in response to a final action must instead be transmitted through (703) 872-9311. These numbers are for Art Unit 1724 correspondence only.

Richard L. Chiesa
August 19, 2003

Richard L. Chiesa

**RICHARD L. CHIESA
PRIMARY EXAMINER
ART UNIT 1724**

August 19, 2003